DEPARTMENT OF TRANSPORTATION
DIVISION OF ENGINEERING SERVICES
Office of Structural Materials
Quality Assurance and Source Inspection

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Contract #: 04-0120F4
Cty: SF/ALA Rte: 80 PM: 13.2/13.9
File #: 69.28

WELDING INSPECTION REPORT

Resident Engineer: Siegenthaler, Peter
Address: 333 Burma Road
City: Oakland, CA 94607

Report No: WIR-024111
Date Inspected: 01-Jun-2011

Project Name: SAS Superstructure
Prime Contractor: American Bridge/Fluor Enterprises, a JV
Contractor: Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island

OSM Arrival Time: 1900
OSM Departure Time: 700
Location: Shanghai, China

CWI Name:	See Below		**CWI Present:**	☑ Yes	☐ No
Inspected CWI report:	☐ Yes	☑ No ☐ N/A	**Rod Oven in Use:**	☑ Yes	☐ No ☐ N/A
Electrode to specification:	☑ Yes	☐ No ☐ N/A	**Weld Procedures Followed:**	☑ Yes	☐ No ☐ N/A
Qualified Welders:	☑ Yes	☐ No ☐ N/A	**Verified Joint Fit-up:**	☐ Yes	☑ No ☐ N/A
Approved Drawings:	☑ Yes	☐ No ☐ N/A	**Approved WPS:**	☑ Yes	☐ No ☐ N/A
			Delayed / Cancelled:	☐ Yes	☑ No ☐ N/A

Bridge No: 34-0006
Component: OBG

Summary of Items Observed:
CWI Inspectors: Mr. Wang Jun and Mr. Cao Hau Zho

On this date CALTRANS OSM Quality Assurance (QA) Inspector, Mr. Paul Dawson, arrived on site at the Zhenhua Port Machinery Company (ZPMC) facility at Changxing Island, in Shanghai China, for the purpose of monitoring welding and fabrication of the San Francisco / Oakland Bay Bridge (SFOBB) components. This QA Inspector observed the following:

OBG Trial Assembly

This QA Inspector observed ZPMC welder Mr. Jiang Junlin, stencil 067876 used shielded metal arc welding procedure WPS-345-SMAW-1G(3F)-FCM-Repair-1 to make segment 13CW repair weld SEG3013K-038. ZPMC QC informed this QA Inspector that critical weld repair document B-CWR-3008 documents repairs of this weld. This QA Inspector observed a welding current of approximately 280 amps, 26.0 volts, the base material had been preheated with a torch and Mr. Jiang Junlin appeared to be certified to make this weld. Items observed on this date appeared to generally comply with applicable contract documents.

This QA Inspector observed ZPMC welder Mr. Wang Guijun, stencil 067275 used flux cored welding procedure WPS-B-P-2214-TC-U4B-FCM-1 to make segment 13CW weld DP3148-001-275. This QA Inspector observed a welding current of approximately 180 amps the base material had been preheated with electrical heaters and Mr. Wang Guijun appeared to be certified to make this weld. Items observed on this date appeared to generally comply with applicable contract documents.

This QA Inspector observed ZPMC welder Mr. Wang Rucheng, stencil 066881 used shielded metal arc welding procedure WPS-B-P-2214-FCM-1 to make OBG segment 13CW welds SEG3015N-195 and 196. This QA Inspector observed a welding current of approximately 180 amperes (amps), the base material had been preheated with electrical heaters and Mr. Wang Rucheng appeared to be certified to make these welds. Items observed on this date appeared to generally comply with applicable contract documents.

This QA Inspector observed ZPMC welder Mr. Li Shoufu, stencil 066674 used shielded metal arc welding procedure WPS-345-SMAW-3G(3F)-Repair-1 to make OBG segment 13AW weld repair SEG3013B-P-128. ZPMC QC informed this QA Inspector that weld repair document B-WR-20911 documents repairs of this weld. This QA Inspector observed a welding current of approximately 160 amps the base material had been preheated with a torch and Mr. Li Shoufu appeared to be certified to make this weld. Items observed on this date appeared to generally comply with applicable contract documents.

This QA Inspector observed ZPMC welder Mr. Pan Ming, stencil 066673 used flux cored welding procedure WPS-B-T-2233-ESAB to make OBG Segment 13AW weld SEG3013P-073. This QA Inspector observed a welding current of approximately of approximately 240 amps, 26.0 volts, the base material had been preheated with electrical heaters and Mr. Pan Ming appeared to be certified to make these welds. Items observed on this date appeared to generally comply with applicable contract documents.

Visual Inspections of segment 13AE PP119 +1500mm to PP120 upper surfaces on the CB side:

ZPMC requested Caltrans personnel to perform visual inspections of OBG segment 13AE between PP119+1500 to PP120 cross beam upper section on June 2, 2011 at around 02:40 hours following the initial pre-blast cleaning of the steel surfaces. This QA Inspector along with other QA Inspectors performed random visual inspections of these areas and observed the following items appear to require weld repairs. This QA Inspector observed item #1 as listed below and the other areas were identified by other QA Inspectors. The following areas were marked on applicable drawings which were forwarded to dayshift QA Inspectors for tracking of repairs.

1. Arc gouge near the bottom of a closed rib on deck plate DP3075A closest to weld 140. This gouge is located approximately 630 mm from SEG3013B @ PP120.0. Depth of the gouge is approximately 4.0 mm.

2. Slag inclusion approximately 14 mm long, 1.5 mm deep located 3050 mm from the end of the weld closest to the center of the OBG. The slag line is in the face of weld SEG3007D-226 on the PP120 side of the weld.

3. Overlap and incomplete fusion in weld relief hole, Longitudinal Diaphragm to deck plate weld @ PP119+1500.

WELDING INSPECTION REPORT

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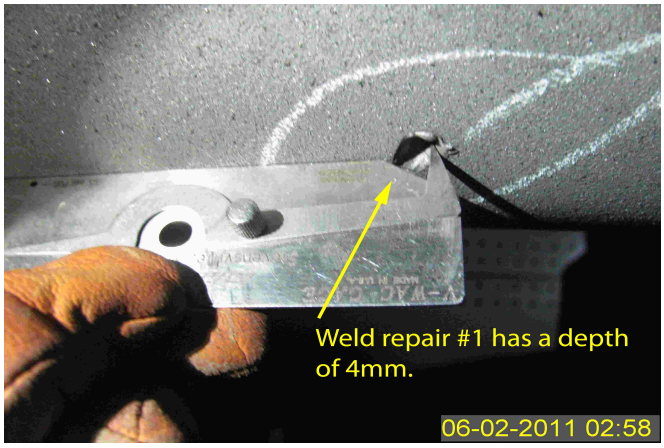

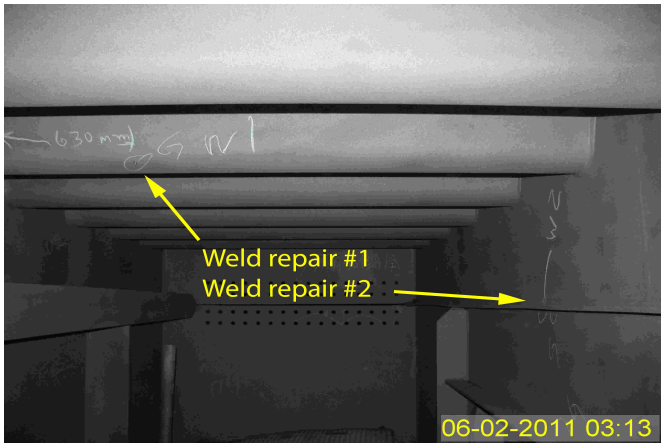

Summary of Conversations:

See Above.

Comments

This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact James Devey +8615000026784, who represents the Office of Structural Materials for your project.

Inspected By:	Dawson,Paul	Quality Assurance Inspector
Reviewed By:	Riley,Ken	QA Reviewer